

SB5100PC

Surface Mount Schottky Barrier Rectifier

Voltage

100 V

Current

5 A

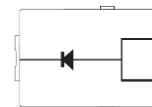
Features

- Ideal for automated placement
- High efficiency Operation
- Low thermal resistance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : TO-277C package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.11 grams

TO-277C



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	100	V
Maximum RMS Voltage		V _{RMS}	70	V
Maximum DC Blocking Voltage		V _{DC}	100	V
Maximum Average Forward Rectified Current		I _{F(AV)}	5	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load		I _{FSM}	100	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V		C _J	180	pF
Typical Thermal Resistance	(Note 1)	R _{θJA}	65	°C/W
	(Note 2)	R _{θJC}	1.65	
	(Note 2)	R _{θJL}	15	
Operating Junction Temperature Range		T _J	-55~150	°C
Storage Temperature Range		T _{STG}	-55~150	°C

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Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.57	0.62	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.71	0.76	
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.77	0.8	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.47	0.52	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.58	0.63	
Reverse current ^(Note 3)	I_R	$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	0.33	3	uA
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	1	15	
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	0.6	1.8	mA

NOTES :

1. Mounted on an FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area.
3. Short duration pulse test used to minimize self-heating effect.

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TYPICAL CHARACTERISTIC CURVES

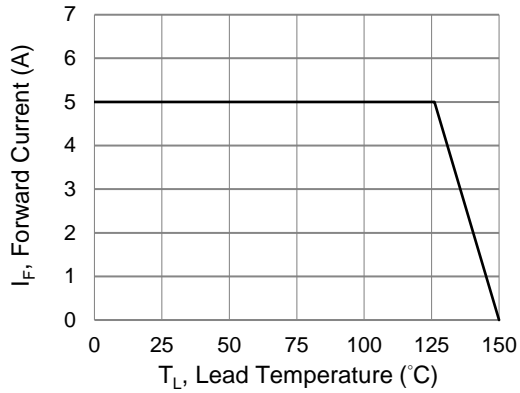


Fig.1 Forward Current Derating Curve

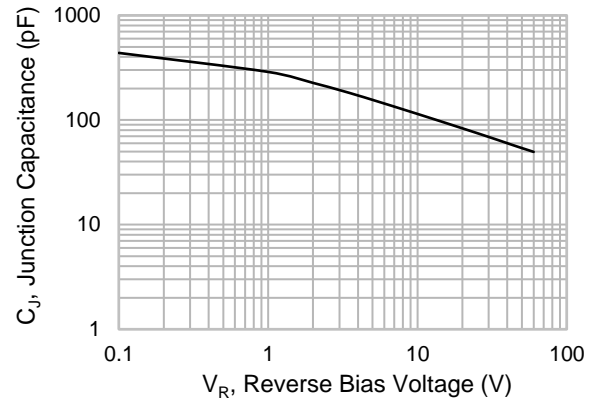


Fig.2 Typical Junction Capacitance

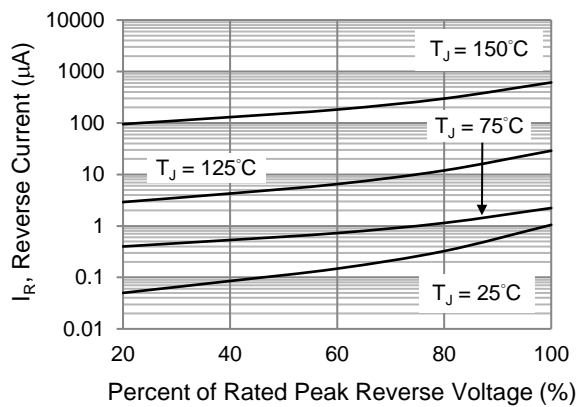


Fig.3 Typical Reverse Characteristics

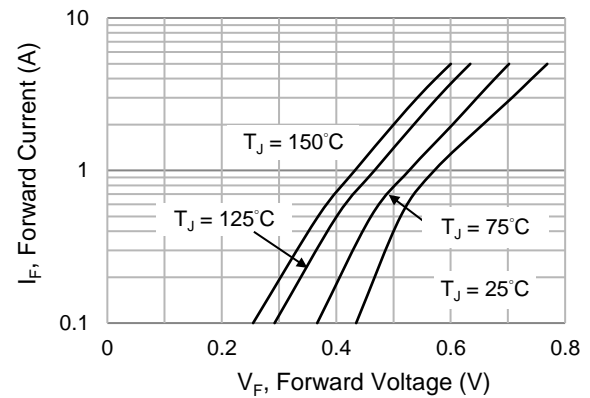


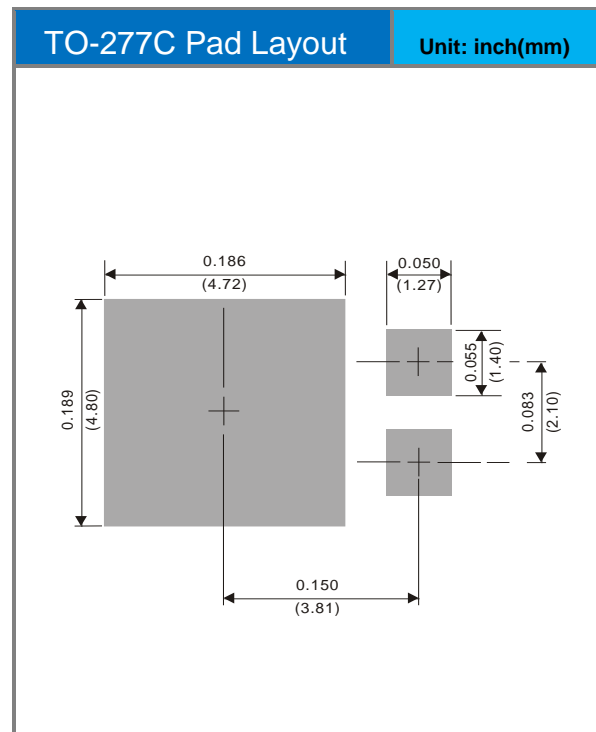
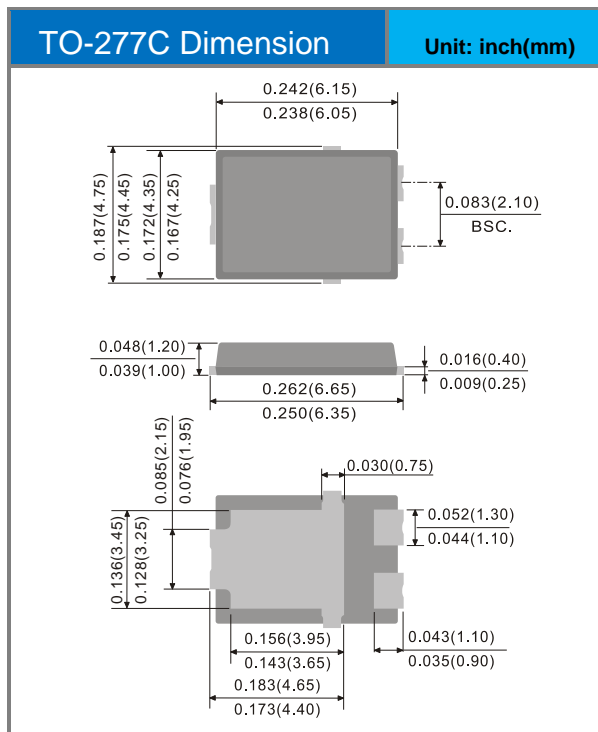
Fig.4 Typical Forward Characteristics

SB5100PC

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB5100PC	TO-277C	5K pcs / 13" reel	SB5100PC

Packaging Information & Mounting Pad Layout



SB5100PC

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